

## CHECKLIST ENVIRONMENTAL ASSESSMENT

<b>Project Name:</b>	Vecta Oil & Gas Heath 2-D Seismic Permit #1565
<b>Proposed Implementation Date:</b>	August 2011
<b>Proponent:</b>	Mowrey Seismic, Inc and Vecta Oil & Gas
<b>Location:</b>	Section 16, Township 11 North, Range 24 East (Common School Trust)
<b>County:</b>	Musselshell County

### I. TYPE AND PURPOSE OF ACTION

The Proponent has applied to the DNRC for a Seismic Exploration Permit to conduct a 2-D seismic project on State land. The proposed project would place, from a motorized vehicle or by foot travel, a 1" receptor cable on the ground for approximately 1,320'. The proposed method for the seismic exploration would use high frequency equipment from a 20-ton large rubber-tired vibrator vehicle traveling along the cable route. At 440' intervals along the cable, the vehicle would vibrate the ground surface from a 4' x 6' vibrating platform. A data recording truck would record all information from the cable. The cable would then be picked up with the same equipment that placed it.

Surface impacts to the Trust land would result from the vibrating platform and the motorized vehicles on the ground. All activities on Trust land from cable placement, seismic exploration vehicles, to cable retrieval would be completed within a two-hour period (the entire survey would last 15 days) and would temporarily disturb the immediate area for that time. Four rubber-tired motorized vehicles consisting of ATVs, pick-up trucks, vibrator vehicle, and a data recording truck would be used for all proposed activities. Vehicles would be allowed to access the proposed route off of the existing roads provided the most direct, least erodible route is utilized. Proposed motorized activities would impact less than an acre of State land.

### II. PROJECT DEVELOPMENT

#### 1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED:

*Provide a brief chronology of the scoping and ongoing involvement for this project.*

No formal public scoping was performed by the Southern Land Office (SLO) for this proposed project. The state grazing lessee, Tranel Ranch, was contacted by Mowrey Seismic. The SLO contacted the Natural Heritage Program and Patrick Rennie, DNRC Archaeologist.

The proposed project area was inspected by Jeff Bollman, SLO Area Planner and Gary Brandenburg, SLO Land Use Specialist.

#### 2. OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION, LIST OF PERMITS NEEDED:

None.

#### 3. ALTERNATIVES CONSIDERED:

**Proposed Alternative:** Approve the issuance of a Seismic Permit #1565 to permit 2-D seismic work on State Trust land in Section 16-T11N-R24E in Musselshell County.

**No Action Alternative:** Deny the request by Vecta Oil and Gas to issue Seismic Permit #1565.

### III. IMPACTS ON THE PHYSICAL ENVIRONMENT

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" if no impacts are identified or the resource is not present.*

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#### 4. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:

*Consider the presence of fragile, compactable or unstable soils. Identify unusual geologic features. Specify any special reclamation considerations. Identify any cumulative impacts to soils.*

The seismic activity is proposed to be limited to the SE¼SE¼ of the subject Trust land. The topography of the proposed project area slopes downward generally from the northwest to the southeast, along the line of the proposed seismic route. All motorized vehicle use would be limited to existing roads and cross country by the most direct, least erodible route off of an existing road to place and retrieve the receptor cable, and drive the vibrating vehicle and recording vehicle. Additionally, motorized vehicle use would occur only during dry or frozen soil conditions to minimize any soil erosion, compaction, and rutting. Any and all disturbed areas would be seeded with a native grass seed mix when soil conditions are appropriate. The soils in the proposed project area consist generally of well-drained loams. No significant impacts are anticipated by the granting of the Permit.

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#### 5. WATER QUALITY, QUANTITY AND DISTRIBUTION:

*Identify important surface or groundwater resources. Consider the potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality. Identify cumulative effects to water resources.*

There is no water source within the proposed project area; therefore no significant impacts are anticipated.

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#### 6. AIR QUALITY:

*What pollutants or particulate would be produced? Identify air quality regulations or zones (e.g. Class I air shed) the project would influence. Identify cumulative effects to air quality.*

No significant impact is expected to air quality, although there may be a minor temporary increase in particulate emission from machinery during the proposed seismic activities. No significant impacts are anticipated.

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#### 7. VEGETATION COVER, QUANTITY AND QUALITY:

*What changes would the action cause to vegetative communities? Consider rare plants or cover types that would be affected. Identify cumulative effects to vegetation.*

The nature of the proposed activity will cause some vegetative disturbance due to the need to drive across areas which do not presently have established roads. However, all motorized vehicle use would be limited to existing roads and cross country travel would be by the most direct, least erodible route off of an existing road to place and retrieve the seismic cable, and drive the vibrating vehicle and recording vehicle. The immediate area where the 4' x 6' vibrating weight platform is placed on the ground would cause some vegetative disturbance. All vehicles would be required to be washed, particularly the undercarriage, to assure removal of dirt and plant material and seeds prior to entering the tract. All motorized vehicle use would occur only during dry or frozen soil conditions to minimize soil erosion, compaction, and rutting. Any and all disturbed areas would be seeded with a native grass seed mix when soil conditions are appropriate. A search of the Montana Natural Resource Information System (NRIS) database revealed no unique plants on this section; therefore no significant impacts are expected.

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**8. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:**

*Consider substantial habitat values and use of the area by wildlife, birds or fish. Identify cumulative effects to fish and wildlife.*

A variety of big game (mule deer and antelope), small mammals, raptors, songbirds, and grouse may traverse this area. Proposed project activities could disrupt wildlife movement and patterns. Due to the limited duration, area proposed for the project activities and the limitation that no activities would be allowed between March 1 and July 15, most nesting and calving activities should not be affected. No significant impacts to terrestrial, avian and aquatic life and habitats are expected to occur as a result of implementing the proposed alternative.

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**9. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:**

*Consider any federally listed threatened or endangered species or habitat identified in the project area. Determine effects to wetlands. Consider Sensitive Species or Species of special concern. Identify cumulative effects to these species and their habitat.*

After consulting the Montana Natural Resource Information System (NRIS) database, the only referenced species for this general area was the Greater Sage-Grouse. There were no leks identified within at least 6,400 meters of the subject section. The habitat for the Greater Sage-Grouse consists mainly of areas with high sagebrush. The subject property has some, but not much sagebrush vegetative cover, especially in the area proposed for seismic testing. Therefore, the parcel would not seem to provide the preferred habitat for the Greater Sage-Grouse. No significant impacts are anticipated from the proposed project.

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**10. HISTORICAL AND ARCHAEOLOGICAL SITES:**

*Identify and determine effects to historical, archaeological or paleontological resources.*

The DNRC Archaeologist was consulted and did not anticipate impacts due to the type of activity proposed, provided it is limited to times when the ground is dry or frozen. Additionally, when SLO staff visited the site in July, a visual survey of the project area was conducted and no cultural features were noted in the proposed project area. No significant adverse impacts are anticipated.

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**11. AESTHETICS:**

*Determine if the project is located on a prominent topographic feature, or may be visible from populated or scenic areas. What level of noise, light or visual change would be produced? Identify cumulative effects to aesthetics.*

The proposed project area is located in a sparsely populated area in northern Musselshell County with very few residences. Due to its location and the short duration of actual proposed project activities, aesthetics are not anticipated to be adversely affected.

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**12. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:**

*Determine the amount of limited resources the project would require. Identify other activities nearby that the project would affect. Identify cumulative effects to environmental resources.*

No significant impacts to environmental resources of land, water, air or energy are expected as a result of implementing the proposed alternative.

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**13. OTHER ENVIRONMENTAL DOCUMENTS PERTINENT TO THE AREA:**

*List other studies, plans or projects on this tract. Determine cumulative impacts likely to occur as a result of current private, state or federal actions in the analysis area, and from future proposed state actions in the analysis area that are under MEPA review (scoped) or permitting review by any state agency.*

There are no other known state or federal environmental reviews taking place in the subject area.

#### IV. IMPACTS ON THE HUMAN POPULATION

- *RESOURCES* potentially impacted are listed on the form, followed by common issues that would be considered.
- Explain *POTENTIAL IMPACTS AND MITIGATIONS* following each resource heading.
- Enter "NONE" if no impacts are identified or the resource is not present.

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##### 14. HUMAN HEALTH AND SAFETY:

*Identify any health and safety risks posed by the project.*

No significant adverse impacts to human health and safety are expected to occur as a result of implementing the proposed alternative.

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##### 15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:

*Identify how the project would add to or alter these activities.*

No significant impacts to industrial, commercial and agricultural activities and production are expected to occur as a result of implementing the proposed alternative.

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##### 16. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:

*Estimate the number of jobs the project would create, move or eliminate. Identify cumulative effects to the employment market.*

The proposed action will have no significant impact on the quantity and distribution of employment.

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##### 17. LOCAL AND STATE TAX BASE AND TAX REVENUES:

*Estimate tax revenue the project would create or eliminate. Identify cumulative effects to taxes and revenue.*

The limited duration of the proposed action and the nature of the activity would not have any significant positive or negative impacts to the local or state tax base.

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##### 18. DEMAND FOR GOVERNMENT SERVICES:

*Estimate increases in traffic and changes to traffic patterns. What changes would be needed to fire protection, police, schools, etc.? Identify cumulative effects of this and other projects on government services*

The implementation of the proposed alternative will not generate any additional demands on services provided by Musselshell County.

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##### 19. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:

*List State, County, City, USFS, BLM, Tribal, and other zoning or management plans, and identify how they would affect this project.*

Implementation of the proposed alternative will not conflict with any locally adopted plans.

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##### 20. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:

*Identify any wilderness or recreational areas nearby or access routes through this tract. Determine the effects of the project on recreational potential within the tract. Identify cumulative effects to recreational and wilderness activities.*

The subject Trust land has low to moderate recreational use potential and it has legal access via Graves Road. The proposed action may have a short term impact on recreational use quality of the tract, partially depending on when the seismic activity occurs. However, the proposed action is of a short duration (2 hours on the Trust land and 15 days total project length) and is not expected to have a significant impact on recreational and wilderness activities.

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**21. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:**

*Estimate population changes and additional housing the project would require. Identify cumulative effects to population and housing.*

No significant adverse impacts to density and distribution of population and housing are expected to occur as a result of implementing the proposed alternative.

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**22. SOCIAL STRUCTURES AND MORES:**

*Identify potential disruption of native or traditional lifestyles or communities.*

There are no native, unique or traditional lifestyles or communities in the vicinity that would be impacted by the proposed alternative.

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**23. CULTURAL UNIQUENESS AND DIVERSITY:**

*How would the action affect any unique quality of the area?*

The proposed alternative would not directly impact cultural uniqueness or diversity.

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**24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:**

*Estimate the return to the trust. Include appropriate economic analysis. Identify potential future uses for the analysis area other than existing management. Identify cumulative economic and social effects likely to occur as a result of the proposed action.*

The proposed action to issue a Seismic Exploration Permit would provide one-time surface damage revenue of \$150 to the Common Schools Trust. Depending on the results of the seismic exploration, there could be future revenue from oil and gas development.

<b>EA Checklist Prepared By:</b>	<b>Name:</b> Jeff Bollman	<b>Date:</b> 12 August 2011
	<b>Title:</b> Southern Land Office Area Planner	

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**V. FINDING**

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**25. ALTERNATIVE SELECTED:**

After reviewing the Environmental Assessment, the proposed alternative has been selected and it is recommended that Seismic Exploration Permit #1565 be issued. The proposed alternative can be implemented in a manner that is consistent with the long-term sustainable natural resource management of the area while also generating revenue for the common school trust.

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**26. SIGNIFICANCE OF POTENTIAL IMPACTS:**

The potential for significant impacts from the proposed action is minimal based on the type of action proposed, the short duration of the testing, its location and the relatively small area that will be disturbed by the action. Additionally, there were no plant species of concern identified on the tract and the only animal species, Greater Sage-Grouse, is not likely to frequent the site due to its lack of preferred habitat. All identified potential impacts will be avoided or minimized by utilizing the mitigations listed below and no significant impacts are expected to occur as a result of implementing the proposed alternative.

The mitigation measures that will be required by the issuance of the Permit include:

1. Permittee will repair any soil damage and seed any disturbed areas with native grass seed, in a mix that is approved by the Southern Land Office prior to it application. The proponent will monitor sites and control weeds for a three-year period after activities are completed.
2. Any and all necessary permits will be secured.
3. All seismic activities are prohibited within 300 feet of any water features. Should any intermittent streams be carrying water during the proposed project, an alternative route at least 300' feet from the stream will be utilized.
4. All vehicle traffic must stay on established roads except when using most direct, least erodible routes and will be limited to time periods/conditions when use of the road will not create ruts, i.e. frozen conditions or periods when the soil moisture content is below 20 percent.
5. All vehicles, particularly the undercarriage, must be washed prior to entering the tract to assure removal of dirt and plant material and seeds.
6. The Permittee shall be responsible for controlling any noxious weeds introduced by Permittee's activity on state Trust land and shall prevent or eradicate the spread of those noxious weeds onto land adjoining the subject section.
7. It is the responsibility of the Permittee to ensure the company that has been contracted to perform the seismic work under this permit has a valid permit with the county and has registered its bond with the Secretary of State's Office.
8. Proponent shall contact surface lessee and DNRC Southern Land Office at least 72 hours prior to any seismic activity on state Trust lands.
9. No vehicle oil changes or petroleum disposal shall occur on the State land. All seismic vehicles will contain suitable fire extinguishers. No open burning will be allowed on state land.
10. All gates will be closed and all fences that are taken down will be repaired promptly.
11. No project activities will be allowed between March 1 and July 15.
12. All seismic activities are prohibited within 300 feet of any structures or oil wells, abandoned or otherwise.

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**27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:**

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EIS

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More Detailed EA

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No Further Analysis

<b>EA Checklist Approved By:</b>	<b>Name:</b>	Matthew Wolcott
	<b>Title:</b>	Southern Land Office Area Manager
<b>Signature:</b> /s/ Matthew Wolcott		<b>Date:</b> 12 August 2011